

In the Claims

1. (Currently amended) A computerized method of video segmentation comprising:

generating a first binary mask and a second binary mask corresponding to video frames segmented from a video, each binary mask comprising a binary image representing one of a foreground or a background object in the corresponding video frame;

generating a transitional segmentation mask for a video frame not segmented from the video by interpolating a the first binary mask and a the second binary mask.

2. (Original) The computerized method of claim 1, wherein the interpolating further comprises:

generating motion field data based on the first binary mask and the second binary mask.

3. (Original) The computerized method of claim 2, wherein the interpolating further comprises:

warping the first binary mask and the motion field data to generate a first warped frame; and

warping the second binary mask and the motion data to generate a second warped frame.

4. (Original) The computerized method of claim 3, wherein the interpolating further comprises:

intersecting the first warped frame and the second warped frame to generate an first intersecting frame.

5. (Original) The computerized method of claim 4, wherein the interpolating further comprises:

differencing the first warped frame and the first intersecting frame to generate a first difference mask.

6. (Original) The computerized method of claim 5, wherein the differencing comprises identifying a first pixel in the first warped frame not in the first intersecting mask.

7. (Original) The computerized method of claim 5, wherein the interpolating further comprises:

differencing the second warped frame and the first intersecting frame to generate a second difference mask.

8. (Original) The computerized method of claim 7, wherein the differencing comprises identifying a first pixel in the second warped frame not in the first intersecting mask.

9. (Original) The computerized method of claim 7, wherein the interpolating further comprises:

intersecting the first difference mask and the second difference mask to generate a second intersecting mask.

10. (Original) The computerized method of claim 9, wherein the interpolating further comprises:

combining the first intersecting mask and the second intersecting mask to generate the transitional mask.

11. (Currently amended) A ~~machine~~computer-readable medium ~~having storing executable~~ instructions to cause a ~~machine-computer~~ to perform a computerized method of video segmentation, the computerized method comprising:

generating a first binary mask and a second binary mask corresponding to video frames segmented from a video, each binary mask comprising a binary image representing one of a foreground or a background object in the corresponding video frame;

generating a transitional segmentation mask for a video frame not segmented from the video by interpolating at the first binary mask and at the second binary mask.

12. (Currently amended) The ~~machine~~computer-readable medium of claim 11, wherein the interpolating further comprises:

generating motion field data based on the first binary mask and the second binary mask.

13. (Currently amended) The ~~machine~~computer-readable medium of claim 12, wherein the interpolating further comprises:

warping the first binary mask and the motion field data to generate a first warped frame; and

warping the second binary mask and the motion data to generate a second warped frame.

14. (Currently amended) The ~~machine~~computer-readable medium of claim 13, wherein the interpolating further comprises:

intersecting the first warped frame and the second warped frame to generate an first intersecting frame.

15. (Currently amended) The ~~machine~~computer-readable medium of claim 14, wherein the interpolating further comprises:

differencing the first warped frame and the first intersecting frame to generate a first difference mask.

16. (Currently amended) The ~~machine~~computer-readable medium of claim 15, wherein the differencing comprises identifying a first pixel in the first warped frame not in the first intersecting mask.

17. (Currently amended) The ~~machine~~computer-readable medium of claim 15, wherein the interpolating further comprises:

differencing the second warped frame and the first intersecting frame to generate a second difference mask.

18. (Currently amended) The ~~machine~~computer-readable medium of claim 17, wherein the differencing comprises identifying a first pixel in the second warped frame not in the first intersecting mask.

19. (Currently amended) The ~~machine~~computer-readable medium of claim 17, wherein the interpolating further comprises:

intersecting the first difference mask and the second difference mask to generate a second intersecting mask.

20. (Currently amended) The ~~machine~~computer-readable medium of claim 19, wherein the interpolating further comprises:

combining the first intersecting mask and the second intersecting mask to generate the transitional mask.

21. (Currently amended) A system comprising:

a processor coupled to a memory through a bus; and

an interpolation process executed by the processor from the memory to cause the processor to generate a first binary mask and a second binary mask corresponding to video frames segmented from a video, each binary mask comprising a binary image representing one of a foreground or a background object in the corresponding video frame and to generate a transitional segmentation mask for a video frame not segmented from the video by interpolating at the first binary mask and at the second binary mask.

22. (Original) The system of claim 21, wherein the interpolation process to further cause the processor to generate motion field data based on the first binary mask and the second binary mask.

23. (Original) The system of claim 22, wherein the interpolation process to further cause the processor to warp the first binary mask and the motion field data to generate a first warped frame, and to warp the second binary mask and the motion data to generate a second warped frame.

24. (Original) The system of claim 23, wherein the interpolation process to further cause the processor to intersect the first warped frame and the second warped frame to generate an first intersecting frame.

25. (Original) The system of claim 24, wherein the interpolation process to further cause the processor to difference the first warped frame and the first intersecting frame to generate a first difference mask.

26. (Original) The system of claim 25, wherein the differencing comprises identifying a first pixel in the first warped frame not in the first intersecting mask.

27. (Original) The system of claim 25, wherein the interpolation process to further cause the processor to difference the second warped frame and the first intersecting frame to generate a second difference mask.

28. (Original) The system of claim 27, wherein the differencing comprises identifying a first pixel in the second warped frame not in the first intersecting mask.

29. (Original) The system of claim 27, wherein the interpolation process to further cause the processor to intersect the first difference mask and the second difference mask to generate a second intersecting mask.

30. (Original) The system of claim 29, wherein the interpolation process to further cause the processor to combine the first intersecting mask and the second intersecting mask to generate the transitional mask.

31. (Currently amended) An apparatus comprising:

a means for generating a first binary mask and a second binary mask
corresponding to video frames segmented from a video, each binary mask comprising a

binary image representing one of a foreground or a background object in the corresponding video frame; and

a means for interpolating the first binary mask and the second binary mask to generate a transitional segmentation mask for a video frame not segmented from the video.

32. (Original) The apparatus of claim 31, wherein the means for interpolating further comprises:

a means for generating motion field data based on the first binary mask and the second binary mask.

33. (Original) The apparatus of claim 32, wherein the means for interpolating further comprises:

a means for warping the first binary mask and the motion field data to generate a first warped frame; and

a means for warping the second binary mask and the motion data to generate a second warped frame.

34. (Original) The apparatus of claim 33, wherein the means for interpolating further comprises:

a means for intersecting the first warped frame and the second warped frame to generate an first intersecting frame.

35. (Original) The apparatus of claim 34, wherein the means for interpolating further comprises:

a means for differencing the first warped frame and the first intersecting frame to generate a first difference mask.

36. (Original) The apparatus of claim 35, wherein the means for differencing comprises identifying a first pixel in the first warped frame not in the first intersecting mask.

37. (Original) The apparatus of claim 35, wherein the means for interpolating further comprises:

a means for differencing the second warped frame and the first intersecting frame to generate a second difference mask.

38. (Original) The apparatus of claim 37, wherein the means for differencing comprises identifying a first pixel in the second warped frame not in the first intersecting mask.

39. (Original) The apparatus of claim 37, wherein the means for interpolating further comprises:

a means for intersecting the first difference mask and the second difference mask to generate a second intersecting mask.

40. (Original) The apparatus of claim 39, wherein the means for interpolating further comprises:

a means for combining the first intersecting mask and the second intersecting mask to generate the transitional mask.